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**RELATIONSHIP BETWEEN EMOTIONAL INTELLIGENCE AND  
ACADEMIC ACHIEVEMENT AMONG HIGHER SECONDARY  
SCHOOL STUDENTS**

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**ABSTRACT**

*The main objective of the present study was to examine the relationship between emotional intelligence and academic achievement among students of higher secondary schools. The secondary objective was to examine the role of various demographic variables of the students including gender socio economic status, parental education and geographical origin in emotional intelligence. The Bar-On Emotional Quotient Inventory was for data collection. Academic achievement of the participants was measured through their annual results. Pearson correlation and t-test was applied to test the hypotheses. Findings are in line with the hypotheses. Significant relationship found between the two constructs. First born students scored high on emotional intelligence as compared to later born students. Students with literate parents scored high as compared to students with illiterate parents. Students from urban areas scored high as compared to students from rural areas. Students from upper socio-economic students scored high on emotional intelligence as compared to students from lower socio-economic status. Female students scored high as compared to male students.*

**Key Words:** Emotional intelligence, Academic achievement

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## **INTRODUCTION**

Emotional intelligence is considered a popular construct and is responsible for success in every aspect of a person life. Goleman (1995) theorized that emotional intelligence provides the base for emotional competencies that promote social and personal skills in individuals for better performance at work places. Those who have high competency can recognize emotions and influence others feelings, as compared to those who have less capability. They normalize their emotions and are able to perform better in organization.

Barton, Dielman and Cattell (1972) assessed the importance of academic achievement with ability and personality factors through their study and concluded that Emotional Intelligence predict achievement in all areas. Through their study they concluded thirty percent of variability in academic grades. Academic success has generated extensive literature, mainly focusing on the impact of cognitive abilities and personality traits. Richardson and Evans (1997) have conducted study on emotional and social aspects of teaching and found the students who were connected with other students showed intelligence, sound emotions and personal achievement.

Bar-On (1996) discovered the term Emotional Quotient, and stated that it reflects abilities that deal to the feelings of other people. He worked on Bar-On emotional quotient inventory with great efforts for seventeen years. It was the first scientific tool that measured emotional intelligence, and focused on personal and professional success (Abraham, 1999). Non-cognitive intellect shapes one's ability and cope pressure with environmental demands. AbiSamra (2000), conduct a study on the relationship of emotional Intelligence and academic achievement, it uncovered that the students with high grade point average were emotionally more intelligent as compared to those who have lowest grade point average.

A correlational study was conducted on the relationship between academic achievement and Emotional Intelligence. It was investigated on the students of Huntsville high school. They were asked to complete the Bar-On EQ-i youth version and the results were correlated with their academic performance. Through statistical analysis, they found significant relationship between academic success and Emotional Intelligence among students (Bar-On & Parker, 2000). Another study found the relationship among the components of the emotional intelligence and its deep effects on students' academic routine under gender

## PAKISTAN JOURNAL OF PSYCHOLOGY

differences. The researcher concluded that students who got high score on emotional intelligence had good academic performance comparatively to those students who obtained low scores on these scales (Asif, 2007).

In a longitudinal study Shoda, Mischel, and Peake (1990) compared academic achievement and Emotional Intelligence stated through high school a group of 14-years-old who resisted desire and found them more self-assertive, socially skilled, independent, persevering, and achieving significantly higher. Parker and Majeski (2002) worked on social and emotional abilities and claimed that these competencies predict educational success. Pool (1997) explained for success in academic achievement, emotional intelligence plays a vital role. Finnegan (1998) concluded that students can learn abilities through school that lead them toward success and achievement. Abisamra (2000) through his study found, teacher should start their teaching with the principles of emotional intelligence at schools. The researcher declares that emotional intelligence affects academic course, syllabus and curriculum.

Demographic factors including gender, birth order, socio economic status, rural urban residence, have much important impact on academic achievement and Emotional Intelligence. Different psychologists have presented different views in this regard. A number of researchers' have examined this issue. Naderi (2009) conducted a descriptive study on Emotional Intelligence as predictor of academic achievement with gender difference among under graduate students. Findings indicated low correlation among variables. Bruni et al. (2006) examined the relationship between psychosocial factors and emotional intelligence on school students. This study indicated that the female had higher academic achievement and emotional intelligence than male. In spite of these, other studies reveal the non significant difference among academic achievement, gender and Emotional Intelligence. Herbert and Stipek (2005) explored that girls developed verbal skills earlier than boys' that means they were more skilled in articulating their feelings and have greater expertise of using words.

Carysi (2001) stated that there is no difference in the kind of self-reported emotion by women and men but there were indeed differences in their intensity. It was confirmed and identified that men are less emotionally expressive than women because they can understand and recognize emotions better. A study was conducted on the effect of gender and grade point average on Emotional Intelligence using the emotional intelligence inventory. The inventory was completed by 138 college students, and data were analyzed by multivariate

## **Akbar, Shah, Khan, Akhter & Riaz**

factorial model with three factors of emotional intelligence as dependent variables (compassion, self-awareness, and attunement) and two independent variables, gender and grade point average. Through statistical analysis showed an overall significant effect of gender on emotional quotient (Sutarso, 1999).

Birth order is a sequential order of children in a family. Birth order plays an important role in formatting the emotions among siblings. Adler (1956) is considered the most prominent in this regard. According to him personality of child is significantly associated with birth order and it affects intelligence and growth of a child. Adler is of the view that children who born first in their family remain supportive, cooperative and responsible. They take care of their young brothers and sisters, while middle born children suffer in different complexes and inferior feelings. They feel competition with their first born. The last born babies are given much importance and family try to develop great skills and high level of self esteem among these children. Researchers focused a deep attention over the concept of birth order in their researches and try to probe into the psychosocial affects and emotional problems among these children. Different researches have been conducted in this regard that reveal the emotions and emotional intelligence among these children. Majority of studies supported that relationship between birth order and emotional intelligence definitely exists. Researches proved that first born child is more emotionally intelligent as compared to last born child.

Herrera and Zonjanc (2003) claimed that children who born first in their families have characteristics of responsibility, intellectually sound, obedient and least emotional, and later born have the characteristics of demonstrative more rational, aggrieved and chatty. They make clear, the first born are considered, more logical than later. Through their studies they claimed, oldest children achieve higher academic proficiencies, than middle born who have social traits, and last born keep emotional and demonstrative characteristics. First born children, have been found higher achievement, drives than later born due to the greater involvement, encouragement, and urging of their parent. They also have more parental guidance and help and because of the close parent-child relationship. First born tended to be more dependent and conforming than those who are last born, they often compensate by their stronger motivation to achieve success in whatever they undertake, closely related to independent is risk taking. To achieve success in any area the person must be able and willing to take certain risk, hoping that they will turn out of this advantage (Shafaq, 2000).

## PAKISTAN JOURNAL OF PSYCHOLOGY

A research was conducted by Sulloway (2007) on birth order and emotional intelligence which reveals that later born children remained the status conscious than first-born's and their first goal is to find a family position. Zajonc (2001) through their convergence theory concluded and came to this point that birth order and emotional intelligence have impact on each other. Their model reveal that intellectual abilities are directly associated with family environment. They identified that first born performs better than the later, and have best level of emotional intelligence. Walton (2001) conducted a study and found significant relationship between emotional intelligence and birth order.

Socio economic status is the mixture of economic and social aspects that measure individual's position in society. It is a dominant agent that has strong effect on emotional intelligence and emotional related elements. It has core effects on achievement and academic achievements. Socioeconomic status is divided in different categories and stages like high middle and low. Brown, George, Curran, and Smith (2003) worked on the relationship over the socio economic status and emotional intelligence and found significant relationship between SES and emotional intelligence.

A descriptive correlation study was conducted on the nursing students of Namdar, Sahebihagh, Ebrahimi, and Rahmani (2008) on the relationship between socio economic status and emotional intelligence. Bar-On Emotional Intelligence scale administered. The 144 students were taken as sample and the inferential statistics method was used for statistical analysis. Results showed the significant relationship between variables i.e. socio-economic status of the students and emotional intelligence. Nichols (2000) conducted a study on the residential status of the rural urban students and their impact on the emotional intelligence. The idea of this critique was to assess the exceptional qualities of rural communities. He described different hardships and problems facing like poor quality of living standard, pitiable self worth and low achievement among the students of such areas.

In nut shell emotional intelligence is the ability to perceive and express emotion, assimilate emotion, understand and regulate emotion in the self and others. There is a fairly considerable body of literature which suggests that as a measured construct, Emotional intelligence is positively related with the academic achievement in educational settings. It is also tried to uncover, how important emotional intelligence has become nowadays in the educational institutions and at other workplaces. We conducted our research to see whether there is any

## **Akbar, Shah, Khan, Akhter & Riaz**

relationship between this intelligence and academic achievement. If the results turn out to be positive, it will help to prepare better students for this new century. By keeping in view the past literature, following hypotheses are formulated:

1. Emotional intelligence would be positively correlated with academic achievement.
2. Female students would have high level of emotional intelligence as compared to male students.
3. Students with literate parents will show high level of emotional intelligence than students with illiterate parents.
4. Students from urban area will show high level of emotional intelligence than the rural area.
5. Students from upper socio-economic class will show high level of emotional intelligence than those belonging to lower socio-economic class.
6. First born students will show high level of emotional intelligence than the later born.

## **METHOD**

### ***Participants***

Disproportionate stratified random sampling technique was used for present sample of 200 students at higher secondary school certificate level (HSSC), including male ( $n = 100$ ) and female students ( $n = 100$ ). The age ranges from 16 to 20 years. Respondents were instructed regarding the importance of study. After providing a brief introduction and necessary instructions, informed consent was obtained from the respondents. Inventory was administered on the respondents, and thirty minutes were given to them for the completion of inventory. In the end the researcher thanked the participants for their valuable cooperation.

### ***Measures***

In the present study adapted Urdu version of Bar-On Emotional Quotient Inventory was applied on current sample. The original English version scale was developed by Bar-On (1996). This Inventory has five main components and 15 subscales. Out of total 117 items where 102 items are overlapped within other subscales. It has self rating responses in the form of five points not true of me-1, seldom true of me-2, sometimes true of me-3, often true of me-4, very

## PAKISTAN JOURNAL OF PSYCHOLOGY

often true of me-5. Various validity and reliability studies were accepted on this emotional quotient inventory in the past. Through Alpha coefficient, its internal reliability coefficient was ranging from .69 to .86, and it was calculated under the samples of seven populations. All types of reliability and validity measures have been taken on this inventory. This emotional quotient inventory is highly reliable and valid instrument. Minimum score would be 133 and maximum score would be 665 on original Bar-On EQ-i. Similarly scores for each subscale would be computed based on the number of items in that subscale. So there are 15 independent scores for each subscale. For measurement and scoring the items of this inventory would be used in the negative and positive format (Bar-On, 1997). Academic achievement of the students was measured through their marks in the annual examination at HSSC level.

### RESULTS

The main objective of the current research was to study the relationship of emotional intelligence with academic achievement at higher secondary school level. The other objective was to examine the role of various demographic variables of the students including gender socio economic status, parental education and geographical origin in emotional intelligence. Descriptive statistics for all study variables was computed followed by Alpha reliability coefficient of Emotional Intelligence Scale. Pearson correlation was applied to determine the relationship of emotional intelligence with academic achievement. Furthermore *t*-test was used to examine the mean differences with respect to various demographic variables.

**Table 1**

*Alpha coefficients, descriptive statistics and Pearson correlation among emotional intelligence and academic achievement (N = 200)*

Scale	<i>α</i>	<i>M</i>	<i>SD</i>	<i>Min</i>	<i>Max</i>	<i>r</i>
<b>Emotional Intelligence</b>	.77	373.61	88.35	281	460	.81*
<b>Academic Achievement</b>	-	672.69	29.57	450	885	

\**p*<.001

Table 1 show that Bar-On Emotional Intelligence Scale has satisfactory internal consistency. Similarly, results of the Pearson correlation indicate that emotional intelligence has significant positive correlation with academic achievement among students.

**Table 2**  
*Mean differences in emotional intelligence with respect to gender socio economic status, parental education and geographical origin (N = 200)*

<b>Variables</b>	<b>Categories</b>	<b>N</b>	<b>M</b>	<b>SD</b>	<b>t</b>
<b>Gender</b>	Male	100	369.50	31.52	1.98*
	Female	100	377.72	27.02	
<b>Parental education</b>	Literate	147	374.91	29.30	2.01**
	Illiterate	053	362.00	30.29	
<b>Geographical origin</b>	Urban	100	376.82	31.20	2.54**
	Rural	100	370.40	27.62	
<b>Socio-economic status</b>	Upper	086	373.18	27.39	2.20**
	Lower	114	373.09	31.22	
<b>Birth order</b>	First born	060	375.86	32.41	2.76**
	Later born	140	372.64	28.38	

\* $p < .05$ , \*\* $p < .01$

Table 2 shows the mean differences in emotional intelligence due to demographic variables. The results indicate that (1) Mean difference among male and female students on emotional intelligence scale is significant. Female students scored high as compared to male students. (2) Mean difference on emotional intelligence scale of literate and illiterate parents of students is significant. Students with literate parents scored high as compared to students with illiterate parents. (3) Mean difference on emotional intelligence scale of urban and rural students is significant. Students from urban areas scored high as compared to students from rural areas. (4) Mean difference on emotional intelligence scale of upper and lower socio-economic students is significant. Students from upper socio-economic students scored high on emotional intelligence as compared to students from lower socio-economic status. (5) Mean difference on emotional intelligence scale of first born and later born students is significant. First born students scored high on emotional intelligence as compared to later born students. The findings are in line with the hypotheses.



**DISCUSSION**

The relationship between emotional intelligence and academic achievement was planned to investigate in this study at higher secondary school certificate level among students. To achieve this objective, the study was conducted over the 200 hundred students of the different five colleges of public and private sector of Jhang district (Punjab) Pakistan. The Urdu adapted version of Bar-On Emotional Quotient Inventory (1996) was used for this purpose. The academic achievement was taken by the students in the form of obtained marks at their HSSC examinations. Through demographic sheet, other information including age, gender, socio economic status of the student's parents, rural urban living status, birth order etc. were taken in to account, the effects of demographic variables on Emotional Intelligence and academic achievement was tried to explore. The researcher decided to take data from the five colleges of public and private sector through using a proper process. Through descriptive statistics all the variables were studied of and were found their mean differences.

The first hypothesis "Emotional intelligence would be positively related with academic achievement." was supported as there is satisfactory relationship between said variables. The finding was in line with past research (Richardson & Evans, 1997; Abraham, 1999; Parker & Majeski, 2002; Pool, 1997). Researches indicated that emotionally sound students have high academic profile. The second hypothesis anticipated that "female students would have high level of emotional intelligence scores on Emotional Quotient Inventory as compared to male students". In the current investigation this hypothesis was supported by observed gender difference. Mean difference was significant and indicated that female students are more emotionally sound as compared to the male students. Herbrt and Stepik (2005) found that the female students had higher academic achievement and Emotional Intelligence than male. Bar-On and Cohen, (2003) findings on gender difference also support this hypothesis that women have better emotional stability comparatively than men.

The third hypothesis was "Students with literate parents will show high level of emotional intelligence than students with illiterate parents". Results showed significant difference among them. For present study literate and illiterate status of the parents were set as described by the definition of literacy according to UNESCO Institute for Statistics (2002) "A person is literate who can read and write a paragraph (3lines) in national/regional language with

## **Akbar, Shah, Khan, Akhter & Riaz**

comprehension”. The antonym to literacy is illiteracy that means inability to read and write.

The fourth hypothesis “Students from upper socio-economic class will show high level of emotional intelligence than the students from lower socio-economic class” was supported in the present study. The findings are consistent with the past research by Namdar et al. (2008) on emotional intelligence and socioeconomic aspects of students. Bar-On emotional quotient inventory was used. Significant relationship was found between variables. Study of Brown, Curran and Smith (2003) also supports this hypothesis which was conducted on Emotional Intelligence, test performance academic achievement, language development, and educational expectations.

The fifth hypothesis was that “students from urban area will show high level of emotional intelligence than the students of rural area.” This hypothesis was partially supported by results. Nichols (2000) studied the association between the residential status and emotional intelligence, and found significant relationship within the variables. The sixth hypothesis was stated as “first born students will show high level of emotional intelligence than the later born” was also supported in the research. Sulloway (2007) conducted studies on the emotional intelligence and the birth order relationship and concluded a strong relationship within the variables. He stated that firstborns are more emotionally better as compared to later born. Another study was conducted on emotional intelligence and birth order by Walton (2001) that found a significant difference between emotional intelligence and birth order.

The present research has certain limitation like any other research in social sciences. One of the boundaries is the foundation of the inventories as a measure. Inventories are of course widely used instruments in social sciences but definitely with certain limitations. The element of social desirability affects the validity of the instrument. Inventory is developed keeping in view these hazards but still the element of social desirability cannot be completely eliminated. Only limited colleges of Jhang district could be approached for the present study. Emotional intelligence is required more to be studied in Pakistani context. However no such study was noted during the literature review by the researcher in Pakistan.

Beside all these limitations, the present study is pretty insightful in understanding the role of emotional intelligence in the academic achievement of

## PAKISTAN JOURNAL OF PSYCHOLOGY

the students. Investigating the role of demographic factors in emotional intelligence also shares some valuable insights. Emotional intelligence is an area, which should be given much attention in Pakistan for the successful educational process. It is the need of the day that emotionally intelligent (students) should be supported in education, and provide them coaching in their curriculum, to support and to take forward to lead Pakistan, prosperous.

A variety of programs, seminars and conferences should be held in different cities of Pakistan which provide necessary information to the teachers for improving the emotional stability of their students and educational management. Especially teachers in this regard, they will be able to handle the students, their educational activities, and educational management. It will stimulate the re-examination of the traditional views about the factors predicting and facilitate the academic achievement. It will support collegeadministration in the enrollment of students.

### REFERENCES

- AbiSamra, N. (2000).The relationship between Emotional Intelligent and Academic Achievement in Eleventh Graders. *Research in Education*, FED, 661.
- Abraham, R (1999). Emotional Intelligence in organizations: A conceptualization. *Genetic, Social and General Psychology Monographs*, 125(2), 209-224.
- Adler, A. (1956). *The Individual Psychology*. New York: Harper Torchbooks.
- Asif, M. (2007). *Effect of emotional intelligence on academic performance*. Unpublished PhD dissertation. National Institute of Psychology, Quaid-I-Azam University Islamabad-Pakistan.
- Bar-On, R. (1996). *The Emotional Quotient Inventory (EQ-i): A test of emotional intelligence*. Toronto, Canada: Multi-Health Systems, Inc.
- Baron-Cohen, S. (2003). *The Essential Difference: men, women and the extreme male brain*. Penguin Basic Books.

### **Akbar, Shah, Khan, Akhter & Riaz**

- Barton, K., Dielman, T. E., & Cattell, R. B. (1972). Personality and IQ measures as predictors of school achievement. *Journal of Educational Psychology*, 63(4), 398-404.
- Brown, C., George-Curran, R., & Smith, M. L. (2003). The role of emotional intelligence in the career commitment and decision making process. *Journal of Career Assessment*, 11, 379-392.
- Bar-On, R., & Parker, J. D. A. (2000). *The Handbook of Emotional Intelligence: Theory, Development, Assessment, and Application at Home, School, and in the Workplace*, Jossey-Bass, San Francisco, CA.
- Bruni, O., Ferini-Strambi, L., Russo, P. M., Antignani, M., Innocenzi, M., Ottaviano, P., et al. (2006). Sleep disturbances and teacher ratings of school achievement and temperament in children. *Sleep Medicine*, 7(1), 43-48.
- Carysi (2001). *The EI Debate: Emotionally Challenged, People Management*. Retrieved March 15, 2010, from <http://uashome.alaska.edu/~jififa/PADM%20612%20IIT%20review/Newman.htm>
- Finnegan, J. E. (1998). Measuring emotional intelligence: Where we are today. Montgomery, AL: Anbum University of Montgomery, School of Education. ERIC Document Reproduction Service
- Goleman, D. (1995). *Emotional intelligence: why it can matter more than IQ*. NewYork: Bantam Books
- Herbert, J. & Stipek, D. (2005). The emergence of gender difference in children's perceptions of their academic competencies. *Journal of Applied Developmental Psychology*, 26 (3), 276-295.
- Herrera, N. C., & Zajonc, R. B. (2003). Beliefs About Birth Rank and Their Reflection in Reality. *Journal of Personality and Social Psychology*, 85 (1), 142-150.
- Naderi, H., Abdullah, R., Aizan, H. T., Sharir, J., & Kumar, V. (2009). Self Esteem, Gender and Academic Achievement of Undergraduate Students. *American Journal of Scientific Research*, 10 (3), 26-37.

## PAKISTAN JOURNAL OF PSYCHOLOGY

- Namdar, H., Sahebihagh, M., Ebrahimi, H., & Rahmani, A. (2008). Assessing emotional intelligence and its relationship with demographic factors of nursing students. *Iranian Journal of Nursing and Midwifery Research*, 13 (4), 12-19.
- Nichols, P. (2000). Bad body fever and deliberate self-injury. *Reclaiming Children and Youth*, 9, 151-156.
- Parker, J. D. A., Summerfeldt, L. J., Hogan, M. J., & Majeski, S. (2001). *Emotional intelligence and academic achievement*. Canadian Psychological Association, Quebec City, Quebec.
- Parker, J. D. A., & Majeski, S. (2002). *Emotional Intelligence and Academic Achievement*. Paper presentation at the Annual Meeting of Canadian Psychological Association. Quebec City, Quebec.
- Pool, C. R. (1997). *Up with Emotional Health. Educational Leadership*; New York: Raven.
- Richardson, R. C., & Evans, E. T. (1997). *Social and emotional competence: motivating cultural responsive education*. Montgomery: Auburn University.
- Shafaq, A. (2002). *Relationship between Academic self concept and Academic among school children*. Unpublished research report, National Institute of Psychology, Quaid-e-Azam university. Islamabad
- Shoda, Y., Mischel, W. & Peake, P. K. (1990). *Predicting adolescent cognitive and self-regulatory competencies from preschool delay of gratification*. *Developmental Psychology*, 26 (6), 978-986.
- Sulloway, F. J. (2007). Birth order and intelligence. *Science*, 317, 1711-1712.
- Sutarso, P. (1999). Gender differences on the emotional intelligence inventory (EQI). Dissertation Abstracts International.
- UNESCO Institute for Statistics (2002). *Projection Model Data Source and/or Literacy Definition*. United Nations Education, Science and Culture Organization.

**Akbar, Shah, Khan, Akhter & Riaz**

Walton, J. L. (2001). The Effect of Birth Order on Intelligence retrieved on 14 April 2010 from [www.webclearinghouse.net/volume/4/ WALTON-TheEffecto.php](http://www.webclearinghouse.net/volume/4/WALTON-TheEffecto.php)

Zajonc, R. B. (2001). The family dynamics of intellectual development. *Intelligence*, 4, 349-361.